

The mode of passing Rivers and gaining height at the same time.



PLATE 7

CHAP. XII.

THE MODE OF CROSSING RIVERS AND GAINING HEIGHT AT THE SAME TIME, PERFORMING THE DOUBLE OPERATION OF AN AQUEDUCT AND LOCKS. (PLATE VII.)

THIS apparatus is the double-inclined plane in all its parts, either for a descending or alternate trade; the stone piers supporting iron rails which compose the plane.

It would be difficult to draw the exact difference, in expence, between this machine and an aqueduct to cross a river, than locks to gain height; but if the immense labour in constructing an extensive and high aqueduct is considered, I conceive the saving will be found very important. The great quantities of stone (*which should be of a good quality*), hewn to certain squares and templets; the frequent long carriage, the timber for centres, and the various preparatory works, all tend to load aqueducts with heavy expences, and render them one of the greatest obstacles in prosecuting canals.

If I suppose it necessary to carry a canal one hundred feet high*, and three hundred feet in length, over a river, it is a moderate calculation, considering the average of situations, to estimate it at the round sum of - - - - - £20,000

To which add one hundred feet lockage for twenty-five ton boats, - - - - - 7,000

Amounting to - - - - - £. 27,000

* There are some aqueducts in contemplation of greater dimensions than here specified.